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WIRELESS CELL PHONE

CROSS-REFERENCES TO RELATED APPLICATION

This application claims the benefit of and priority to U.S. Provisional Application No. 60/420,747 filed October 22, 2002, the disclosure of which is hereby incorporated by reference.

FIELD OF THE INVENTION

The present invention is directed to a wireless cell phone which can be configured as a mobile telephone and for a variety of other tasks.

BACKGROUND OF THE INVENTION

Modern mobile cell phones not only provide voice communication but also are useful for a variety of other tasks such as email, internet access, photography, etc. In most present-day cell phones the telephone keypad serves the dual function of dialing telephone numbers and as an input device for the other functions. As mobile telephones become smaller and smaller, it is more difficult to depress the proper keys for carrying out the various other functions. There is a need for a mobile telephone which can be configured to provide a keyboard for the other functions which is easier to manipulate.

OBJECTS AND SUMMARY OF THE INVENTION

It is an object of the present invention to provide a cell phone with a foldable, rotatable or an insertable keyboard assembly wherein in one position the keyboard assembly serves as a telephone keypad while in another position the keyboard serves as a data communicator for carrying out the other functions available with the telephone.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention will be more clearly understood from the following detailed description of the invention when read in conjunction with the accompanying drawings of which:

Figure 1 is a perspective view of the cell phone in the closed position.

Figure 2 is a perspective view of the cell phone in the open position providing a mobile telephone with a standard keypad and LCD display.

Figure 3 is a rear perspective view of the wireless cell phone of Figure 2.

Figure 4 is a front perspective view of the wireless cell phone with the keyboard assembly unfolding upwardly.

Figure 5 is a front perspective view of the wireless cell phone with the keyboard assembly being rotated.

Figure 6 is a perspective view of the wireless cell phone with the keyboard assembly nested in place to expose text or communication keypad.

Figure 7 is a perspective view of another embodiment of the cell phone in which the telephone/data communication keypad assembly is removable.

Figure 8 is another perspective view of the wireless cell phone showing the other end of the removable keypad assembly.

Figure 9 is a perspective view showing the removable keypad assembly inserted and providing the telephone keypad.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to the various figures, Figure 1 shows the mobile telephone 11 in its folded position. The cover 12 includes an external liquid crystal display (LCD) which permits viewing incoming telephone calls etc. without opening the telephone. The cell phone also includes a camera 13. Referring to Figure 2, the cover is opened providing a larger LCD 16. The keypad assembly which is connected to a two-axis hinge 17 to be further described is nested for use as a telephone keypad 18. The cell phone includes a microphone 19 and an earpiece speaker 21. Figure 3 shows a rear view more clearly illustrating the battery 22 and the antenna 23.

The keypad assembly 24 can be rotated upwardly about the hinge 17 as shown in Figure 4, rotated as shown in Figure 5 to expose the internet communication keypad and lowered as shown in Figure 6 to provide a keypad 26 with the LCD display 16. In both the position of Figures 2 and 6, the electrical contacts 27 on the keypad assembly and telephone provide the necessary electrical connections between the telephone keypad assembly electronics and the

communication electronics in the body of the cell phone for operating the telephone/data communicator.

A second embodiment of the invention provides a keypad assembly 24 which is removable as illustrated in Figures 7 and 8 and which includes contacts 27 and can be placed into the telephone receptacle and latched into position by latch 29 to expose the telephone keyboard or rotated to expose the data communication keyboard (not shown). Figure 9 illustrates the keypad in place and latched, which provides a compact, easy to use wireless telephone data communicator.

The present invention is disclosed by reference to the specific embodiments and examples detailed above. It is to be understood that these examples are intended in an illustrative rather than limiting sense, as it is contemplated that modifications and combinations will readily occur to those skilled in the art, which modifications and combinations will be within the scope of the invention and the scope of the appended claim.